

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

<b>Appellants:</b>	Martin <i>et al.</i>	<b>Conf. No.:</b>	8788
<b>Serial No.:</b>	09/916,792	<b>Art Unit:</b>	2142
<b>Filing Date:</b>	07/27/2001	<b>Examiner:</b>	Blair, Douglas B.
<b>Title:</b>	REGULATING ACCESS TO A SCARCE RESOURCE	<b>Docket No.:</b>	GB920010043US1 (IBMR-0128)

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**BRIEF OF APPELLANTS**

This is an appeal from the Final Rejection dated March 20, 2006, rejecting claims 1-40.

This Brief is accompanied by the requisite fee set forth in 37 C.F.R. 1.17 (c).

**REAL PARTY IN INTEREST**

International Business Machines Corporation is the real party in interest.

**RELATED APPEALS AND INTERFERENCES**

There are no related appeals or interferences.

## **STATUS OF CLAIMS**

As filed, this case included claims 1-40. Claims 1-40 remain pending. Claims 1-40 stand rejected and form the basis of this appeal.

## **STATUS OF AMENDMENTS**

No amendment has been submitted in response to the After Final Rejection filed by the Office on March 20, 2006.

## **SUMMARY OF THE CLAIMED SUBJECT MATTER**

The present invention relates to regulating access by users to a scarce resource. A request for access to the scarce resource is received. It is determined whether the access level for the scarce resource is at a desired maximum and responsive to determining that it is, the requester is allocated to an access slot. The requester is then provided with a notification of their allocated access slot. Access is available to the requester when the allocated slot is enabled.

Claim 1 claims a method for regulating access by users to a scarce resource, the method comprising the steps of: receiving a request for immediate access to the scarce resource (see e.g., page 3, lines 8-17, page 4, lines 23-26; page 17, lines 14-19; FIG. 3a, item 300); determining, upon receipt of the request, whether the access level for said scarce resource is currently at a desired maximum (see e.g., page 3, lines 8-17; FIG. 3a, item 210); responsive to determining that said access level is currently at a desired maximum, automatically allocating to an access slot, which specifies a time period during which the scarce resource may be accessed, said requester (see e.g., page 17, line 21 through page 18, line 19; FIG. 3a, items 210 and 250); and providing said requester with a notification of their allocated access slot, access being available to said

requester at any point in the time period during which said allocated slot is enabled (see e.g., page 18, lines 21-27; FIG. 3a, item 260; see also page 23, lines 4-11).

Claim 18 claims an apparatus for regulating access by users to a scarce resource, the apparatus comprising the steps of: means for receiving a request for immediate access to the scarce resource (see e.g., page 3, lines 8-17, page 4, lines 23-26; page 17, lines 14-19; FIG. 3a, item 300); means for determining, upon receipt of the request, whether the access level for said scarce resource is currently at a desired maximum; means, responsive to determining that said access level is currently at a desired maximum, for automatically allocating to an access slot, which specifies a time period during which the scarce resource may be accessed, said requester (see e.g., page 17, line 21 through page 18, line 19; FIG. 3a, items 210 and 250); and means for providing said requester with a notification of their allocated access slot, access being available to said requester at any point in the time period during which said allocated slot is enabled (see e.g., page 18, lines 21-27; FIG. 3a, item 260; see also page 23, lines 4-11).

Claim 35 claims a computer program comprising program code adapted to perform the steps of: receiving a request for immediate access to the scarce resource (see e.g., page 3, lines 8-17, page 4, lines 23-26; page 17, lines 14-19; FIG. 3a, item 300); determining, upon receipt of the request, whether the access level for said scarce resource is currently at a desired maximum; responsive to determining that said access level is currently at a desired maximum, automatically allocating said requester to an access slot that specifies a time period during which the scarce resource may be accessed (see e.g., page 17, line 21 through page 18, line 19; FIG. 3a, items 210 and 250); and providing said requester with a notification of their allocated access slot, access being available to said requester at any point in the time period during which said allocated slot is enabled (see e.g., page 18, lines 21-27; FIG. 3a, item 260; see also page 23, lines 4-11).

Claim 36 claims a method for determining whether a user can be granted access to a scarce resource after an access slot allocated to said user has expired (see e.g., page 8, lines 6-10), the method comprising the steps of: tracking at least one interaction by said user associated with said scarce resource (see e.g., page 7, lines 9-19; page 11, lines 4-17); responsive to an interaction, comprising a request, by said user for access to said scarce resource after the allocated access slot has expired, using at least one tracked interaction to determine whether the access level for said scarce resource is currently at a desired maximum (see e.g., page 8, lines 12-21); responsive to determining that said access level is currently at a desired maximum, determining whether the scarce resource can accommodate immediate access by the user to the scarce resource (see e.g., lines 12-26); and responsive to determining that scarce resource can accommodate immediate access, granting said immediate access (see e.g., lines 12-26; see also page 9, lines 16-21; page 10, line 23 through page 11, line 2).

Claim 39 claims an apparatus for determining whether a user can be granted access to a scarce resource after an access slot allocated to said user has expired (see e.g., page 8, lines 6-10), the apparatus comprising: means for tracking at least one interaction by said user associated with said scarce resource (see e.g., page 7, lines 9-19; page 11, lines 4-17); means, responsive to an interaction, comprising a request, by said user for access to said scarce resource after the allocated access slot has expired, for using at least one tracked interaction to determine whether the access level for said scarce resource is currently at a desired maximum (see e.g., page 8, lines 12-21); responsive to determining that said access level is currently at a desired maximum, determining whether the scarce resource can accommodate immediate access by the user to the scarce resource (see e.g., lines 12-26); and means, responsive to determining that scarce resource

can accommodate immediate access, for granting said immediate access (see e.g., lines 12-26; see also page 9, lines 16-21; page 10, line 23 through page 11, line 2).

Claim 40 claims a computer program for determining whether a user can be granted access to a scarce resource after an access slot allocated to said user has expired (see e.g., page 8, lines 6-10), said program comprising program code adapted to perform the steps of: tracking at least one interaction by said user associated with said scarce resource (see e.g., page 7, lines 9-19; page 11, lines 4-17); responsive to an interaction, comprising a request, by said user for access to said scarce resource after the allocated access slot has expired, using at least one tracked interaction to determine whether the access level for said scarce resource is currently at a desired maximum (see e.g., page 8, lines 12-21); responsive to determining that said access level is currently at a desired maximum, determining whether the scarce resource can accommodate immediate access by the user to the scarce resource (see e.g., lines 12-26); and responsive to determining that scarce resource can accommodate immediate access, granting said immediate access (see e.g., lines 12-26; see also page 9, lines 16-21; page 10, line 23 through page 11, line 2).

### **GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

1. Claims 1, 5, 7, 10-11, 14-15, 17-18, 22, 24, 27-28, 31-32, 34-35, 36-37, 39 and 40 stand rejected under 35 U.S.C. §102(e) as being anticipated by Tonouchi (U.S. Patent Pub. No. 2002/0004833), hereafter “Tonouchi.”
2. Claims 2-3, 6, 19-20 and 23 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tonouchi in view of Webb *et al.* (U.S. Patent Pub. No. 2002/0083342), hereafter “Webb.”
3. Claims 4, 12-13, 16, 21, 29-30, 33 and 36 stand rejected under 35 U.S.C. §103(a) as being

unpatentable over Tonouchi in view of Bondarenko *et al.* (U.S. Patent No. 6,389,028), hereafter “Bondarenko.”

4. Claims 8-9 and 25-26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tonouchi in view of Slotznick (U.S. Patent No. 6,011,537), hereafter “Slotznick.”

## **ARGUMENT**

### **1. REJECTION OF CLAIMS 1, 5, 7, 10-11, 14-15, 17-18, 22, 24, 27-28, 31-32, 34-35, 36-37, 39 AND 40 UNDER 35 U.S.C. §102(e) OVER TONOUCHI**

Appellants respectfully submit that the rejection of claims 1, 5, 7, 10-11, 14-15, 17-18, 22, 24, 27-28, 31-32, 34-35, 36-37, 39 and 40 under 35 U.S.C. 102(e) over Tonouchi is defective.

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987); see MPEP ' 2131, p. 2100-69. Because each and every element of claims 1, 5, 7, 10-11, 14-15, 17-18, 22, 24, 27-28, 31-32, 34-35, 36-37, 39 and 40 is not found in Tonouchi, Appellants respectfully request overrule of the rejection under 35 U.S.C. §102(e).

In the above referenced Final Office Action, the Examiner alleges that Tonouchi teaches responsive to determining that said access level is currently at a desired maximum, automatically allocating to an access slot, which specifies a time period during which the scarce resource may be accessed, said requester. In support, the Office cites a passage of Tonouchi that teaches confirming whether an additional reservation would cause the user's number of reservations to exceed an acceptable number of reservations and, if not, executing further processes. Paras. 136-138. These further processes include writing the reservation request to the corresponding time 09/849,291

period of the reservation table and sending a reservation confirmation page to the user. Paras. 140-141. To this extent, subsequent to determining whether the additional reservation is valid, Tonouchi merely records the selection and sends the conformation and does not allocate the user to a time period.

In fact, the time period of Tonouchi is not automatically allocated at all, but rather is requested by the user. Pars. 0134-0135. The Office argues that "...the fact that Tonouchi allows the user to confirm the time slot does not mean the allocation is not 'automatic'." Final Office Action, page 8. However, Appellants respectfully submit that this interpretation of Tonouchi is incorrect. Specifically, as shown in the example beginning in para. 0171 of Tonouchi, the user "...writes a time period from 10:00 to 17:00 on Mar. 26, 2000 as a desirable reservation time period composed of a start date and an end date." Par. 0195. Thus, Tonouchi teaches that the user selects the reservation, and not that the user confirms an already allocated reservation.

Furthermore, Tounouchi confirms whether or not maximum number of reservations is exceeded *after* the user has selected the time period and, as such, does not allocate the time period based on a determination that the maximum number of reservations is exceeded. Para. 0134-0136, 0195-0197. In fact, if the maximum number of reservations is exceeded, Tonouchi, rather than allocating a time period, deems the reservation that has been selected by the user to be unacceptable. Para. 0136, 0138. Thus, a determination in Tonouchi that the maximum number of reservations has been exceeded causes the reservation request to be canceled. Accordingly, nowhere in the passages cited by the Office or elsewhere does Tonouchi teach that its reservation is automatically allocated in response to a determination that an access level is currently at a desired maximum.

In contrast, the claimed invention includes "...responsive to determining that said access

level is currently at a desired maximum, automatically allocating to an access slot, which specifies a time period during which the scarce resource may be accessed, said requester.”

Claim 1. As such, the requester of the claimed invention does not merely reserve a time period as does the user in Tonouchi, but instead, the requester is automatically allocated to an access slot. Furthermore, unlike the selection of Tonouchi, which is prior to the confirmation, in the claimed invention, the automatic allocation to an access slot is responsive to the determining. Still further, a determination in the claimed invention that the access level is currently at a desired maximum results in an automatic allocation to an access slot and not a cancellation of a reservation request as in Tonouchi. For the above stated reasons, the access slot of the claimed invention is not taught by the reservation of Tonouchi.

In the above referenced Final Office Action, the Examiner alleges that Tonouchi teaches determining, upon receipt of the request, whether the access level for said scarce resource is currently at a desired maximum. Instead, the passage of Tonouchi cited by the Office teaches that “The contract server...investigates the number of reservations in the time period on which the user performs the reservation request, and confirms whether or not it exceeds the acceptable number of reservations.” Page 7, par. [0136]. To this extent, Tonouchi confirms for a single user whether or not the user’s allowed number of reservations has been exceeded. However, this confirmation pertains to how many future reservations there exist for a particular user and not the number of users that are currently accessing the resource. This confirmation cannot include the current time period because Tonouchi automatically checks for a reservation containing the current time upon authentication and, if so, connects the user to the service. Para. 0102-0104. As such, the user is only routed to the contract server that performs the confirmation if there is no current reservation. Para. 0104. Thus, the confirmation of Tonouchi is never performed for a



user who has a reservation at the current time. Accordingly, the contract server of Tonouchi confirms whether the number of reservations exceeds the acceptable number of reservations only for a future time period of a reservation request, and not for the current point in time.

Furthermore, the investigation of Tonouchi is performed in response to a reservation request for future service and not upon receipt of a request for immediate access. The Office argues that "...if the current time is not filled up then it will be presented to the user thus allowing immediate access." Final Office Action, page. However, Tonouchi never expressly teaches that this is the case. Instead, Tonouchi only teaches that a user that has no current reservation "...can get access to the Web server and use a reservation set service and a reservation confirmation service. However, it can not get access to the Internet." Para. 0104. Thus, in making its statement the Office makes a baseless assumption that Tonouchi allows a reservation to be made for a time period that includes the current time. However, Tonouchi never expressly states or implies that this is the case. Every statement or example in Tonouchi regarding the making of a reservation involves a future period of time. See e.g., paras. 0176, 0191, 0195. Accordingly, nowhere does Tonouchi teach that its contract server determines, upon receipt of a request for immediate access, whether the access level for the resource is currently at a desired maximum.

In contrast, the claimed invention includes "...determining, upon receipt of the request, whether the access level for said scarce resource is currently at a desired maximum." Claim 1. As such, the determining of the claimed invention does not merely confirm whether the number of reservations in a future time period exceeds the acceptable number of reservations as does the contract server of Tonouchi, but instead determines whether the access level for a scarce resource is currently at a desired maximum. Furthermore, rather than being in response to a

reservation request for future service as in Tonouchi, the determining of the claimed invention occurs upon receipt of a request for immediate access. Thus, the determining of the claimed invention is not taught by the contract server of Tonouchi.

In the above referenced Final Office Action, the Examiner alleges that Tonouchi teaches responsive to determining that said access level is currently at a desired maximum, determining whether said scarce resource is able to accommodate immediate access by said late requester. Tonouchi has no provision for accommodating immediate access by a user has missed or gone beyond a time period, but instead, the user in Tonouchi follows the same procedure for reserving a future time period in all cases. Pars. 0136-0138. Specifically, for a user that has exceeded the allotted time, Tonouchi teaches that

The contract server 150 uses the network management server 160, and commands the edge router 220 to stop routing to the Internet 180 and switch the routing destination to the ISP LAN 250 (Step A200). Thus the user *can not get access to the Internet* 180. Para. 0113-0114; emphasis added.

To this extent, there is no special treatment given to a user in Tonouchi who has exceeded the time period.

The Office argues that “...there is nothing different [in the claimed invention] about the method for allowing ‘late’ access from the method for allowing regular access so therefore as discussed above Tonouchi teaches allowing ‘late’ access.” Final Office Action, page 8.

Appellants respectfully disagree. For example, suppose there are three users: regular user, late user and holdover user. Further suppose that regular user, who has no allocated access slot, and late user, who has an access slot that has already expired, attempt to access the scarce resource of the claimed invention while the resource is currently at a desired maximum (e.g., a desired maximum number of users are currently using the scarce resource). Regular user will automatically be allocated an access slot in the future, while the claimed invention will make a

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further determination for late user as to whether the system can accommodate the late user. A further determination of this sort is also made in the case of holdover user, which is using the scarce resource when the user's time slot expires. Thus, late user and holdover user both have preferred treatment over regular user. Tonouchi does not teach this type of preferred treatment.

This distinction is borne out in the claims of the invention, wherein upon receipt of a request from normal user, the claimed invention, "...responsive to determining that said access level is at a desired maximum, automatically allocat[es] to an access slot, which specifies a time period during which the scarce resource may be accessed, said requester." Claim 1. As such, the requestor of a regular request of the claimed invention is not granted immediate access if the access level is at a desired maximum, but instead is automatically allocated to an access slot. In contrast, if the request is from late user or from holdover user, it is determined "...responsive to determining that said access level is currently at a desired maximum, ...whether the scarce resource can accommodate immediate access by the user to the scarce resource." Claim 36. Thus, the late requestor of the claimed invention may be granted immediate access even when the access level of the scarce resource is at the desired maximum. Thus, in contrast to Tonouchi in which all scenarios use the same process, the claimed invention uses a different determination for late requests and/or users that have gone beyond their time period than the determination that it uses for regular requests. Thus, the determining step for a late request as included in the claimed invention is not taught by the reservation of a time period in Tonouchi. Accordingly, Appellants request withdrawal of this rejection.

**B. REJECTION OF CLAIMS 2-3, 6, 19-20 AND 23 OVER TONOUCHI IN VIEW OF WEBB.**

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify a reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Appellants respectfully submit that the Tonouchi and Webb references, taken alone or in combination, fail to meet each of the three basic criteria required to establish a *prima facie* case of obviousness. As such, the rejection under 35 U.S.C. §103(a) is defective.

With respect to the rejected claims, Appellants incorporate the above enumerated arguments.

**C. REJECTION OF CLAIMS 4, 12-13, 16, 21, 29-30, 33 and 36 UNDER 35 U.S.C. §103(a) OVER TONOUCHI IN VIEW OF BONDARENKO**

With respect to the rejected claims, Appellants incorporate the above enumerated arguments.

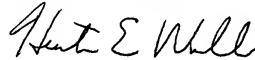
**D. REJECTION OF CLAIMS 8-9 and 25-26 UNDER 35 U.S.C. §103(a) OVER TONOUCHI IN VIEW OF SLOTZNICK**

With respect to the rejected claims, Appellants incorporate the above enumerated arguments. Thus, the Examiner has failed to prove a *prima facie* case of obviousness.

## CONCLUSION

In summary, Appellants submit that claims 1-40 are allowable because Tonouchi fails to teach each and every feature of the claimed invention and because the cited references, taken alone or in combination, fail to meet each of the three basic criteria required to establish a *prima facie* case of obviousness.

Respectfully submitted,



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## CLAIMS APPENDIX

### Claim Listing:

1. A method for regulating access by users to a scarce resource, the method comprising the steps of:
  - receiving a request for immediate access to the scarce resource;
  - determining, upon receipt of the request, whether the access level for said scarce resource is currently at a desired maximum;
  - responsive to determining that said access level is currently at a desired maximum, automatically allocating to an access slot, which specifies a time period during which the scarce resource may be accessed, said requester; and
  - providing said requester with a notification of their allocated access slot, access being available to said requester at any point in the time period during which said allocated slot is enabled.
2. The method of claim 1, wherein the step of providing said requester with a notification of their allocated access slot comprises:
  - issuing said requester with a ticket comprising access slot information, at least a part of said access slot information being used by said requester to determine when said allocated slot is enabled.
3. The method of claim 2, wherein said access slot information comprises a start time for said access slot and an expiry time for said access slot.
4. The method of claim 1, comprising the step of:
  - downloading onto said requester's computer an executable program for preventing said requester from attempting to access said scarce resource until said requester's access slot has been enabled.
5. The method of claim 1, comprising the step of:
  - responsive to said requester re-requesting access to said scarce resource, determining whether said access slot is enabled; and
  - responsive to determining that said access slot is enabled, granting access.
6. The method of claim 5, wherein a re-request presents a ticket issued to the requester upon the first request, said ticket denoting an access slot information, said method further comprising the step of:
  - using said presented ticket to determine whether access is available to said requester.
7. The method of claim 5, wherein the step of granting access comprises:
  - diverting said requester to a first server hosting said scarce resource.

8. The method of claim 5, comprising the step of:
  - responsive to determining that access is not available, diverting said request to a second server, said second server providing the requester with entertainment whilst waiting for said access slot to be enabled.
9. The method of claim 1, comprising the step of:
  - providing said requester with entertainment whilst said requester is waiting for said access slot to be enabled.
10. The method of claim 1, wherein the step of determining whether said access level for said scarce resource is at a desired maximum comprises:
  - tracking the number of users currently accessing the scarce resource; and
  - comparing said number with a predetermined maximum value.
11. The method of claim 1, comprising the steps of:
  - receiving a late request for access to said scarce resource from said requester having missed the time period during which the allocated slot was enabled;
  - determining, upon receipt of the late request, whether the access level for said scarce resource is currently at a desired maximum;
  - responsive to determining that said access level is currently at a desired maximum, determining whether said scarce resource is able to accommodate immediate access by said late requester; and
  - responsive to determining that it is possible to accommodate immediate access, granting immediate access to said requester.
12. The method of claim 1, comprising the steps of:
  - determining the average time spent accessing said scarce resource; and
  - determining the length of subsequent access slots based on said average time.
13. The method of claim 1, wherein said scarce resource comprises a chain of resources.
14. The method of claim 1, comprising the steps of:
  - determining that said requester's slot is at an end; and refusing access to the scarce resource by said requester.
15. The method of claim 1, comprising:
  - determining that said requester's access slot is at an end;
  - determining that said requester has not finished accessing said scarce resource;
  - determining, in response to a determination the said requester has not finished accessing said scarce resource, whether the access level for said scarce resource is currently at a desired maximum;
  - responsive to determining that said access level is currently at a desired maximum, determining whether said scarce resource is able to accommodate continued access by said requester; and
  - responsive to determining that said requester is able to accommodate continued access, granting continued access to said requester.

16. The method of claim 13, wherein said access slot only applies to one of the resources in the chain and any other resource in said chain is accessible whether or not said slot is enabled.

17. The method of claim 1, comprising the steps of:

- receiving a request for access to said scarce resource;
- responsive to determining that said requester previously opted to leave said scarce resource early, determining whether the access level for said scarce resource is currently at a desired maximum;
- responsive to determining that said access level is currently at a desired maximum, determining whether said scarce resource can re-accommodate immediate access by said requester; and
- responsive to determining that the scarce resource can re-accommodate immediate access, granting said requester with immediate access to said scarce resource.

18. Apparatus for regulating access by users to a scarce resource, the apparatus comprising the steps of:

- means for receiving a request for immediate access to the scarce resource;
- means for determining, upon receipt of the request, whether the access level for said scarce resource is currently at a desired maximum;
- means, responsive to determining that said access level is currently at a desired maximum, for automatically allocating to an access slot, which specifies a time period during which the scarce resource may be accessed, said requester; and
- means for providing said requester with a notification of their allocated access slot, access being available to said requester at any point in the time period during which said allocated slot is enabled.

19. The apparatus of claim 18, wherein the means for providing said requester with a notification of their allocated access slot comprises:

- means for issuing said requester with a ticket comprising access slot information, at least a part of said access slot information being used by said requester to determine when said allocated slot is enabled.

20. The apparatus of claim 19, wherein said access slot information comprises a start time for said access slot and an expiry time for said access slot.

21. (Original) The apparatus of claim 18, comprising:

- means for downloading onto said requester's computer an executable program for preventing said requester from attempting to access said scarce resource until said requester's access slot has been enabled.

22. The apparatus of any of claims 18, comprising:

- means, responsive to said requester re-requesting access to said scarce resource, for determining whether said access slot is enabled; and
- means, responsive to determining that said access slot is enabled, for granting access.



23. The apparatus of claim 22, wherein a re-request presents a ticket issued to the requester upon the first request, said ticket denoting an access slot information, said apparatus further comprising:

means for using said presented ticket to determine whether access is available to said requester.

24. The apparatus of claim 22, wherein the means for granting access comprises:

means for diverting said requester to a first server hosting said scarce resource.

25. The apparatus of claim 22, comprising:

means, responsive to determining that access is not available, for diverting said request to a second server, said second server providing the requester with entertainment whilst waiting for said access slot to be enabled.

26. The apparatus of claim 18, comprising:

means for providing said requester with entertainment whilst said requester is waiting for said access slot to be enabled.

27. The apparatus of claim 18, wherein the means for determining whether said access level for said scarce resource is at a desired maximum comprises:

means for tracking the number of users currently accessing the scarce resource; and

means for comparing said number with a predetermined maximum value.

28. The apparatus of claim 18, comprising:

means for receiving a late request for access to said scarce resource from said requester having missed the time period during which the allocated slot was enabled;

means for determining, upon receipt of the late request, whether the access level for said scarce resource is currently at a desired maximum;

means for determining, responsive to determining that said access level is currently at a desired maximum, whether said scarce resource is able to accommodate immediate access by said late requester; and

means, responsive to determining that it is possible to accommodate immediate access, for granting immediate access to said requester.

29. The apparatus of claim 18, comprising:

means for determining the average time spent accessing said scarce resource; and means for determining the length of subsequent access slots based on said average time.

30. The apparatus of claim 18, wherein said scarce resource comprises a chain of resources.

31. The apparatus of claim 18, comprising the steps of:

means for determining that said requester's slot is at an end; and

means for refusing access to the scarce resource by said requester.

32. The apparatus of claim 18, comprising:

means for determining that said requester's access slot is at an end;

means for determining that said requester has not finished accessing said scarce resource;  
means for determining, in response to a determination the said requester has not finished accessing said scarce resource, whether the access level for said scarce resource is currently at a desired maximum;

means for determining, responsive to determining that said access level is currently at a desired maximum, whether said scarce resource is able to accommodate continued access by said requester; and

means, responsive to determining that said requester is able to accommodate continued access, for granting continued access to said requester.

33. The apparatus of claim 30, wherein said access slot only applies to one of the resources in the chain and any other resource in said chain is accessible whether or not said slot is enabled.

34. The apparatus of claim 18, comprising:

means for receiving a request for access to said scarce resource;

means, responsive to determining that said requester previously opted to leave said scarce resource early, for determining whether the access level for said scarce resource is currently at a desired maximum;

means for determining, responsive to determining that said access level is currently at a desired maximum, whether said scarce resource can re-accommodate immediate access by said requester; and

means, responsive to determining that the scarce resource can re-accommodate immediate access, for granting said requester with immediate access to said scarce resource.

35. A computer program comprising program code adapted to perform the steps of:

receiving a request for immediate access to the scarce resource;

determining, upon receipt of the request, whether the access level for said scarce resource is currently at a desired maximum;

responsive to determining that said access level is currently at a desired maximum, automatically allocating said requester to an access slot that specifies a time period during which the scarce resource may be accessed; and

providing said requester with a notification of their allocated access slot,

access being available to said requester at any point in the time period during which said allocated slot is enabled.

36. A method for determining whether a user can be granted access to a scarce resource after an access slot allocated to said user has expired, the method comprising the steps of:

tracking at least one interaction by said user associated with said scarce resource;

responsive to an interaction, comprising a request, by said user for access to said scarce resource after the allocated access slot has expired, using at least one tracked interaction to determine whether the access level for said scarce resource is currently at a desired maximum;

responsive to determining that said access level is currently at a desired maximum, determining whether the scarce resource can accommodate immediate access by the user to the scarce resource; and

responsive to determining that scarce resource can accommodate immediate access, granting said immediate access.

37. The method of claim 36, wherein the request for access is a request for continued access, said request being the only interaction tracked.

38. The method of claim 36, wherein said scarce resource comprises a chain of resources and wherein the step of using at least one tracked interaction to determine whether the scarce resource can accommodate immediate access by the user to the scarce resource comprises:  
determining the point reached by said user in the chain.

39. Apparatus for determining whether a user can be granted access to a scarce resource after an access slot allocated to said user has expired, the apparatus comprising:

means for tracking at least one interaction by said user associated with said scarce resource;

means, responsive to an interaction, comprising a request, by said user for access to said scarce resource after the allocated access slot has expired, for using at least one tracked interaction to determine whether the access level for said scarce resource is currently at a desired maximum;

responsive to determining that said access level is currently at a desired maximum, determining whether the scarce resource can accommodate immediate access by the user to the scarce resource; and

means, responsive to determining that scarce resource can accommodate immediate access, for granting said immediate access.

40. A computer program for determining whether a user can be granted access to a scarce resource after an access slot allocated to said user has expired, said program comprising program code adapted to perform the steps of:

tracking at least one interaction by said user associated with said scarce resource;

responsive to an interaction, comprising a request, by said user for access to said scarce resource after the allocated access slot has expired, using at least one tracked interaction to determine whether the access level for said scarce resource is currently at a desired maximum;

responsive to determining that said access level is currently at a desired maximum, determining whether the scarce resource can accommodate immediate access by the user to the scarce resource; and

responsive to determining that scarce resource can accommodate immediate access, granting said immediate access.

## **EVIDENCE APPENDIX**

No evidence is entered and relied upon in the appeal.

## **RELATED PROCEEDINGS APPENDIX**

No decisions rendered by a court or the Board in any proceeding are identified in the related appeals and interferences section.